	NEW S. BUTTON GUIDE	1/1	76	10

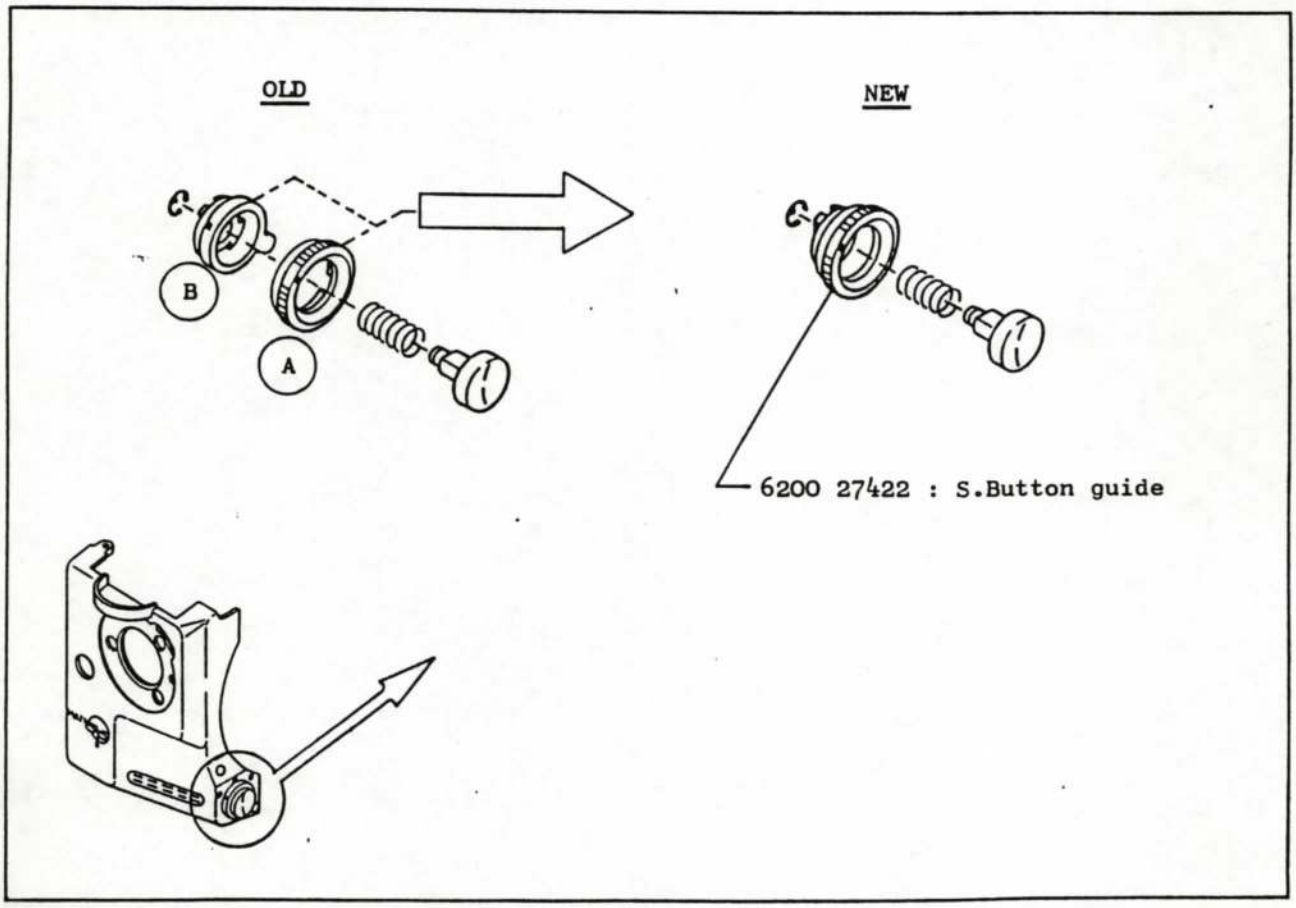
OUR REF.NO. 060

The Ⓐ and Ⓑ parts of the S.Button guide has been modified in a unit part to avoid dropping out of Ⓐ parts.

Modification Date : Since 1987 October.

1. Old New Parts Interchangeability :

(YES.) NO.

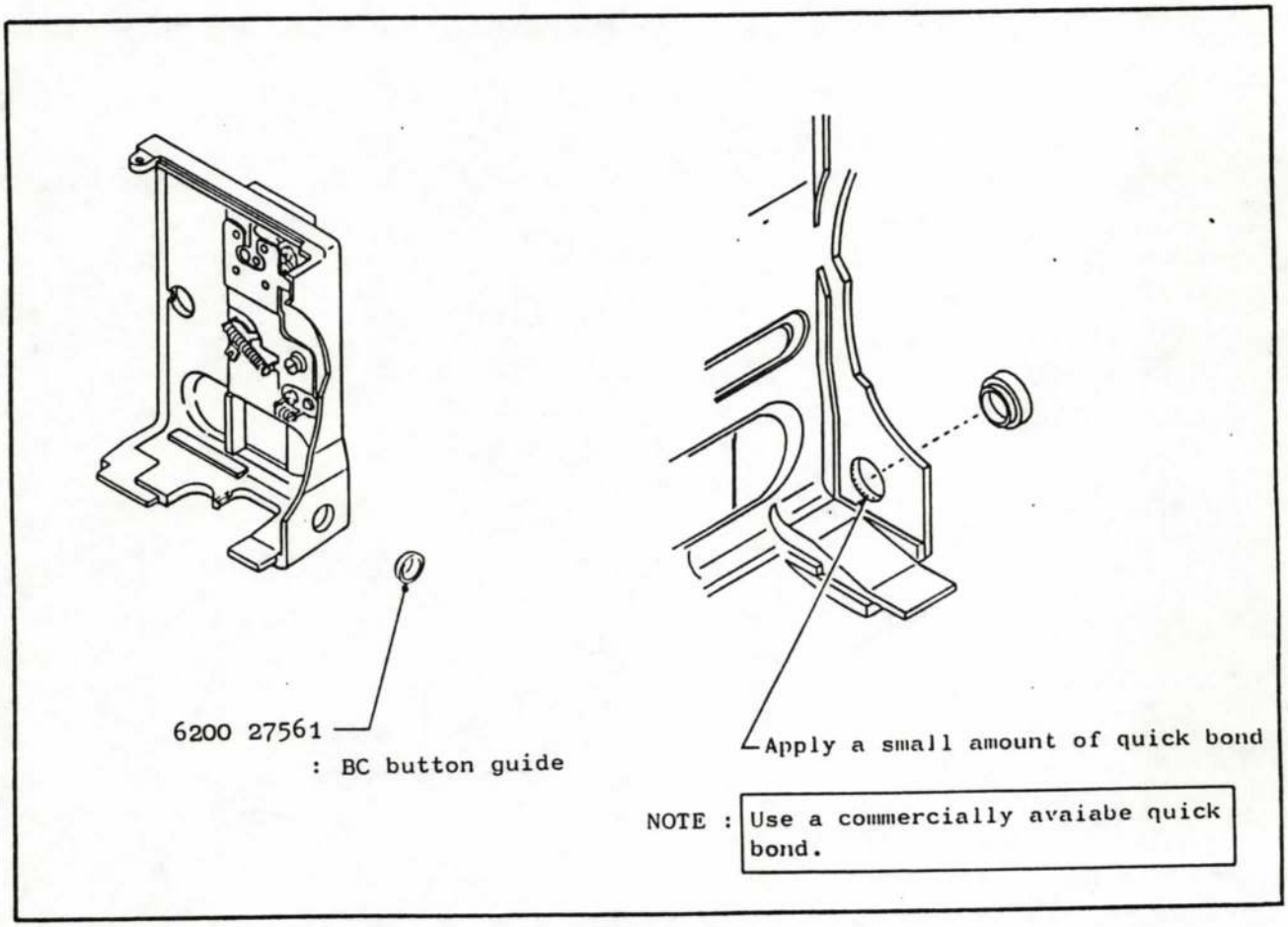


Remarks

20 JUL 88

Mamiya HK

* Spare parts supply : from 25 May 1987.



NOTE : Use a commercially avaiabe quick bond.

M645 SUPER	2	CAMERA BODY
	7	TECHNICAL BULLETIN

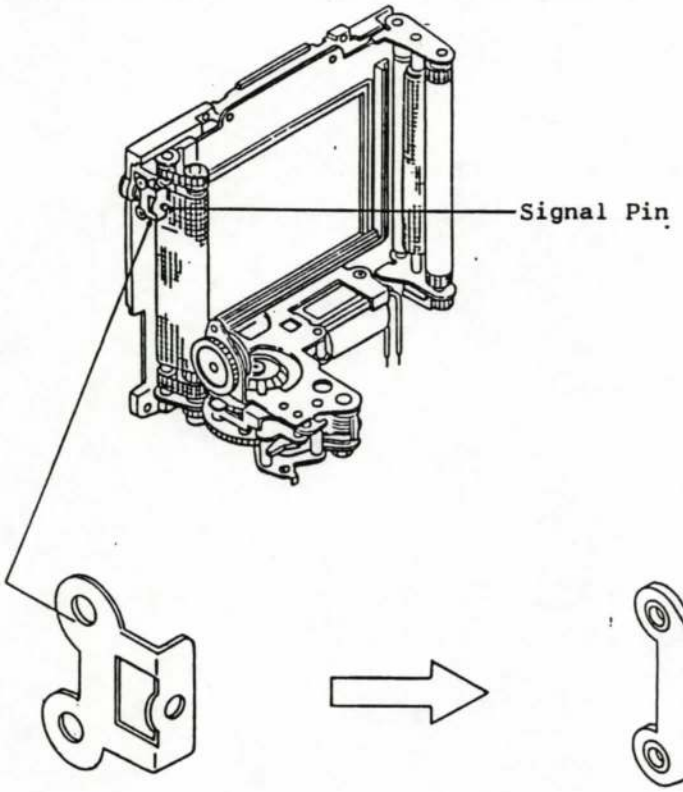
	NEW ANGEL PLATE	1/1	76	8

OUR REF.NO. 046

Phenomenon : Signal Pin do not operate properly.

Modification : Shape of Angel plate.

Modification Date : Since 1987 May Production.



6200 17172 : Angel plate

Old

New

Remarks

08	MAY	87

IMPROVEMENT OF MIRROR MECHANISM SYSTEM

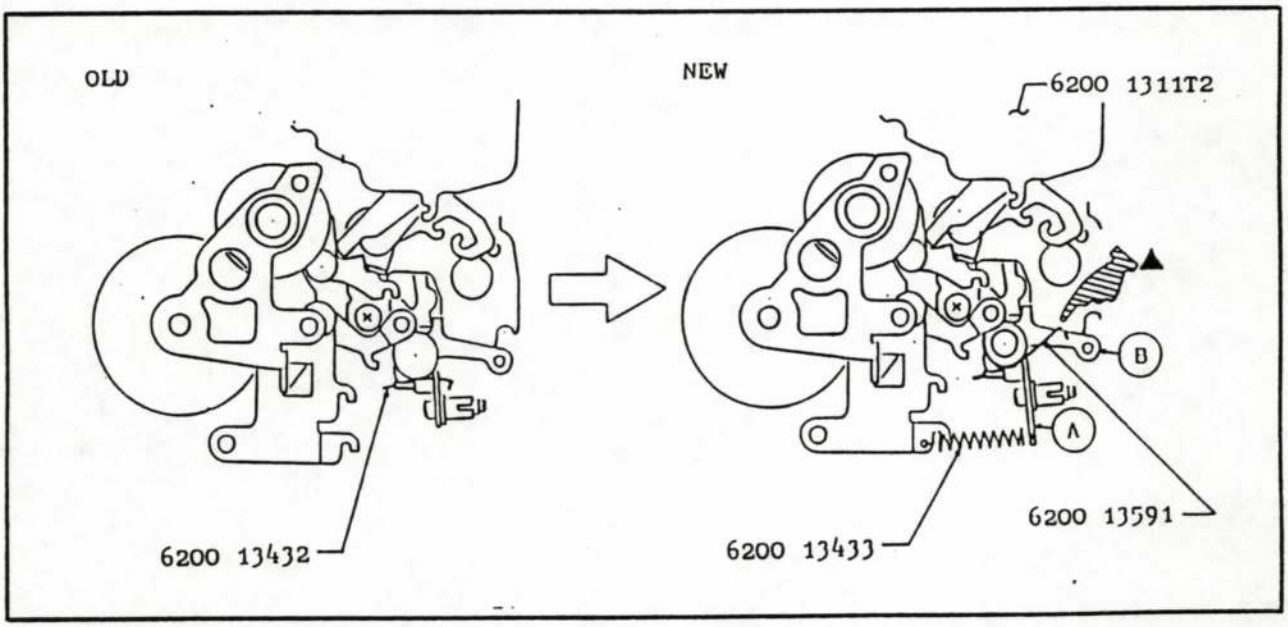
OUR REF.NO 041

Phenomenon : When winding crank is wound, suddenly mirror is released and stays at upper position.

Cause : Lever A and B do not operate properly.

Modification : 1) An additional new spring : 6200 13432
2) Change of spring shape and its fixing position.

Modification Date : Since 1987 March production.



Remarks

18 MAR 87

IMPROVEMENT OF M.BASE PLATE (SIGNAL LEVER) 2/2 | 76 | 7

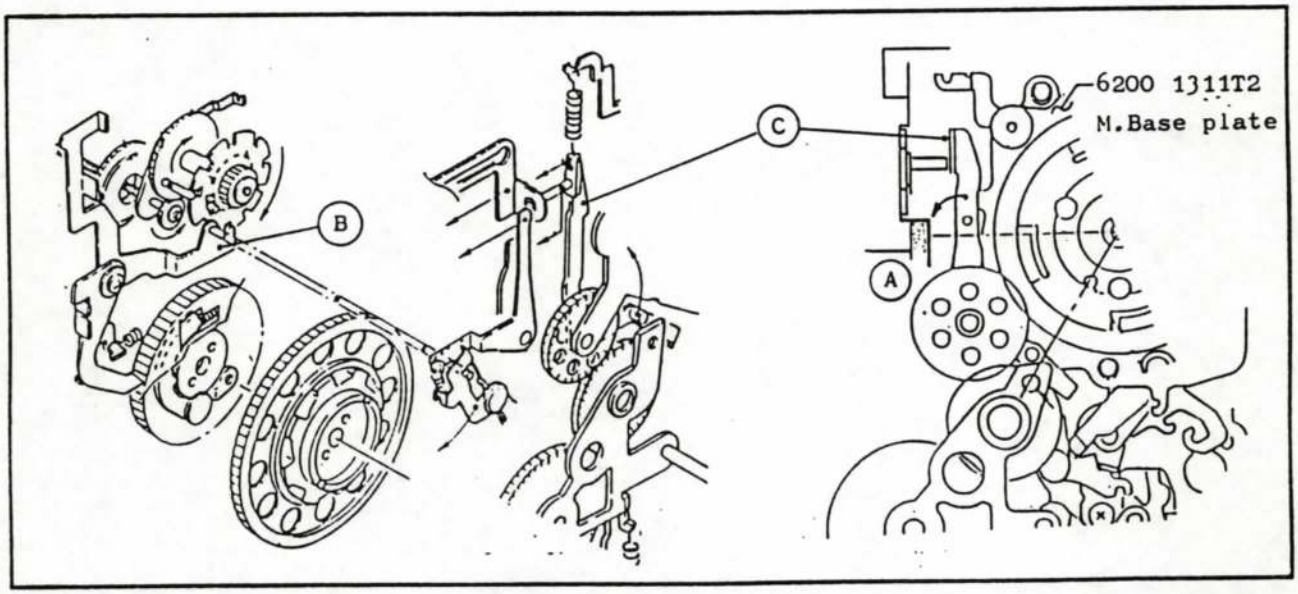
OUR REF.NO 041

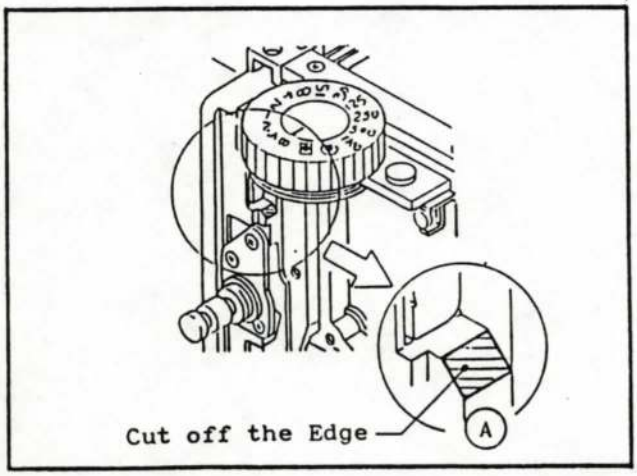
Phenomenon : When the (C) lever is depressed, sometimes the (B) lever does not disengage completely.

Cause : Failure of depressing the (C) lever.

Modification : Shape of (C) lever.

Modification Date : Since 1987 March Production.





NOTE :
If replacement of the M.base plate (6200-1311T2) Cut off the body edge with scraper (A) as shown in figure.

Remarks

18 | MAR | 87

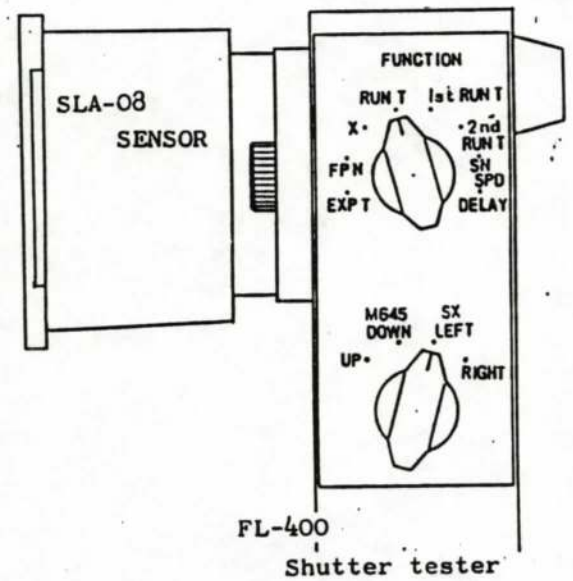
	SLA-08 SENSOR FOR FL-400 SHUTTER TESTER	1/4	76	6

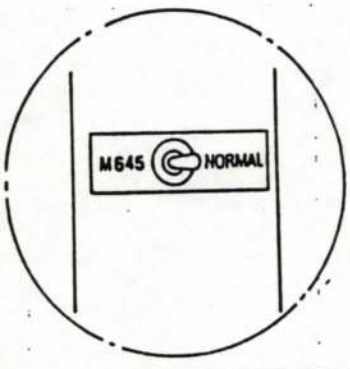
OUR REF.NO 032

When using SLA-08 SENSOR for FL-400 shutter tester,follwing check and adjustment should be made.

A. Type I

Fig 1





1) Attach SLA-08 SENSOR to FL-400 and the set the selector switches as shown in Fig.1.

A : RUN T

B : SX LEFT

C : NORMAL

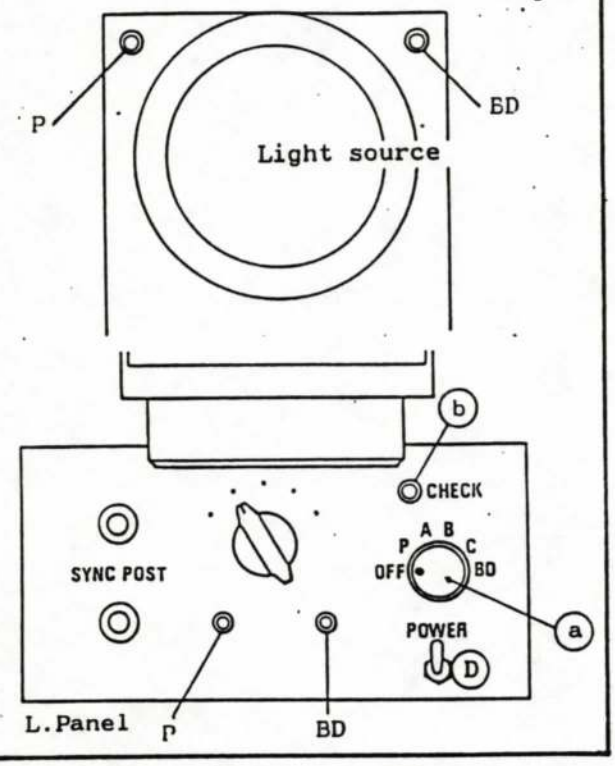
Remarks

28	JAN	87

SLA-08 SENSOR FOR FL-400 SHUTTER TESTER | 2/4 | 76 | 6

OUR REF.NO 032

Fig 2

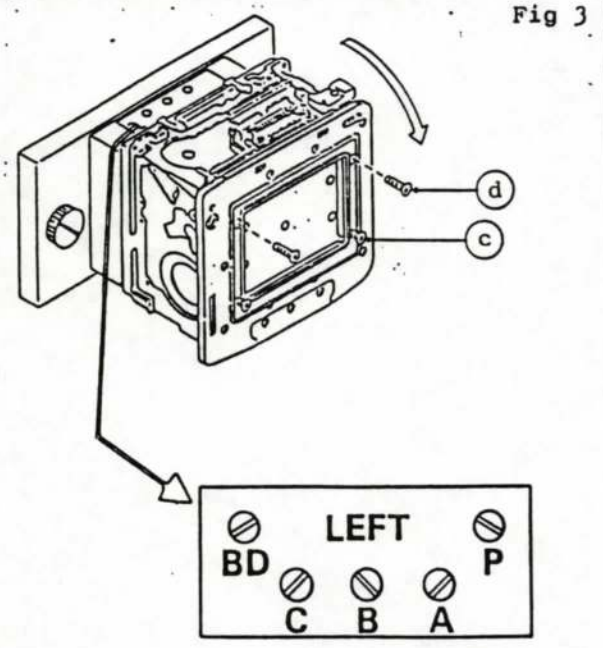


2) Set the power switch D "ON" Then, LEDs P and BD on both sides of Light source and L.panel light up.

3) Nexst, while switching the selector on P, A, B, C and BD, CHECK LED b light up at each setting position. The LED P and BD on both sides of Light source and L.panel also light up.

ADJUSTMENT

Fig 3



Phototransistor
variable resistor

1) Loosen the screw c of SLA-08 SENSOR and remove the screw d , Move the main body of the SENSOR toward arrow direction so that the variable resistor BD and P may easily be adjusted.

2) Set the selector a (Fig.2) at the position P and turn the variable resistor P and light up LEDs P on both sides of Light source and L.panel, and also light up CHECK LED b .

3) In the same manner as step 2), set the selector a at the position A, B, C, and BD, and adjust each variable resistor.

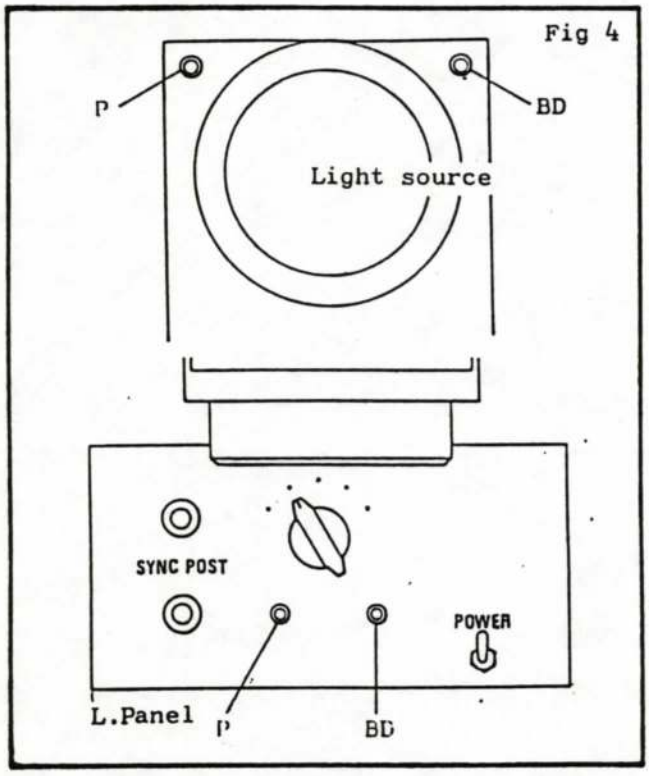
After adjusting, set the selector a at "OFF" position, and use.

Remarks

28 JAN 87

	SLA-08 SENSOR FOR FL-400 SHUTTER TESTER	3/4	76	6

OUR REF.NO 032.

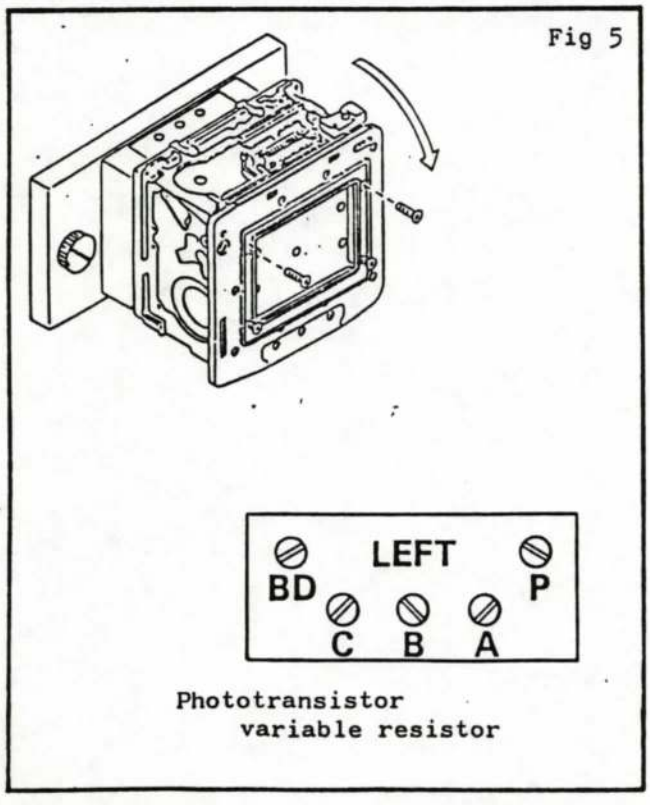


CHECK

B. Type II

1) Attach SLA-08 SENSOR to FL-400 as in the same manner as Tye I,step 1).

2) Set the power switch D "ON" LEDs P and BD on both sides of Light source and L.panel light up.(Fig.4)



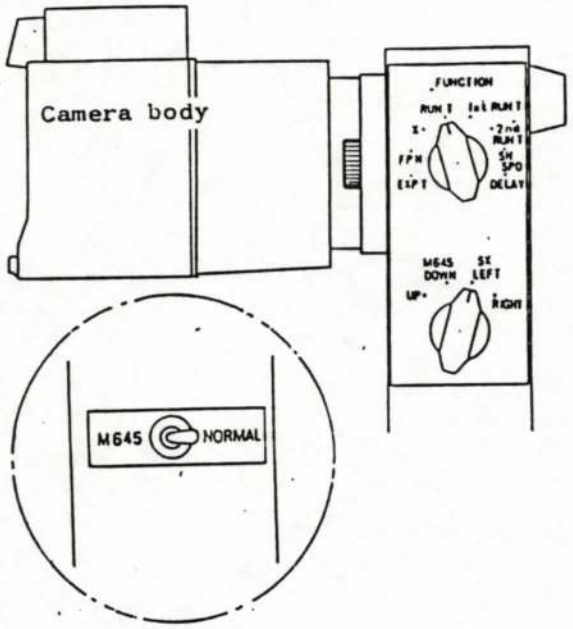
ADJUSTMENT

1) In the same manner as Type I,step 1) and 2),turn the variable resistors P and BD,and let the LEDs P and BD light up on both sides of Light source and L.panel.(Fig.5)

Remarks

28 JAN 87

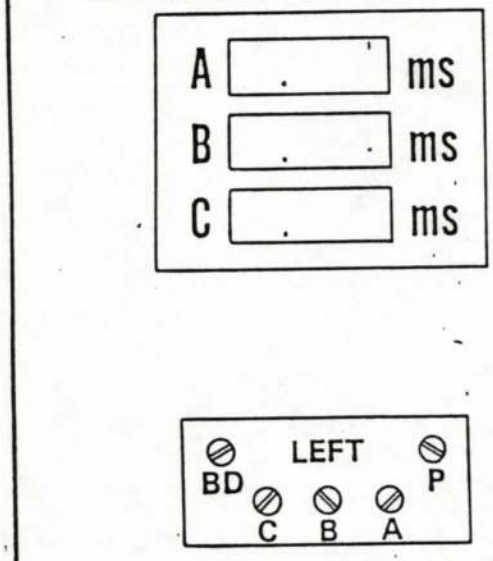
Fig 6



2) Attach the camera body to SLA-08 SENSOR and set the selector switch at the position as shown in Figure.

3) Use the master body and release the shutter, and check if the shutter speed is indicated correctly. If the shutter speed indication does not stop, adjust in the following method.

Fig 7



4) Turn the variable resistor and release the shutter. While so doing, try to find out the position where the shutter speed indication does not stop, and adjust so that the indicator will stop.

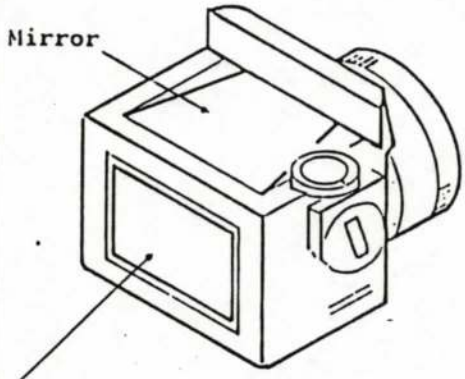
Example : If the counter display A does not stop, turn the variable resistor A, and adjust.

	REPAIR FOR MIRROR LOCKED UP	1/2	76	5

OUR REF.NO. 025

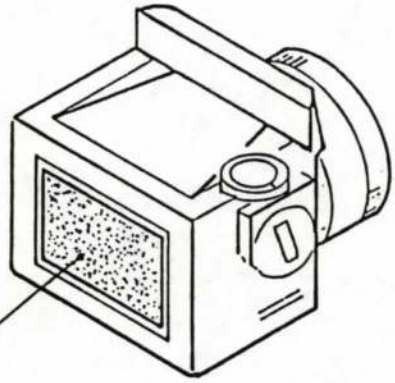
Phenomenon :

A When wound up, mirror does not return and stays at risen position.



Shutter curtain is kept open.

A' As same as abovb A



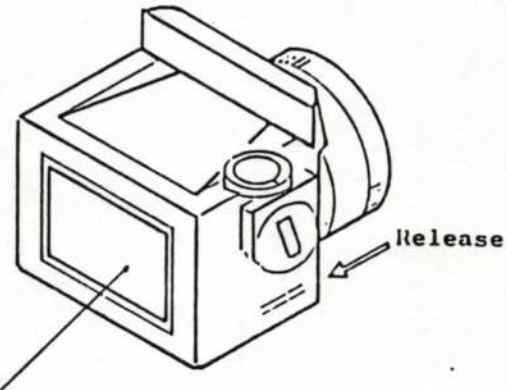
Shutter curtain (2nd) is closed.

Cause :

1) Improper adjustment of the mirror release lever.

Phenomenon :

B After released,mirror does not return and stays risen position.



Shutter curtain is kept open.

Cause :

1) Shutter curtain ribbon was teard off.

* If the second shutter curtain of the mechanical shutter release does not function,the cause should be that the shutter curtain ribbon is off.

2) Dirty spring of the trigger switch and imporoper contact pressure. (proper contact pressure : 30g)

Remarks

26	NOV	86

REPAIR FOR MIRROR LOCKED UP | 2/2 | 76 | 5

OUR REF.NO. 025

Repair Steps : A & A'

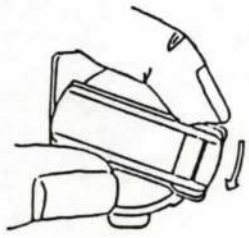


Fig. 1

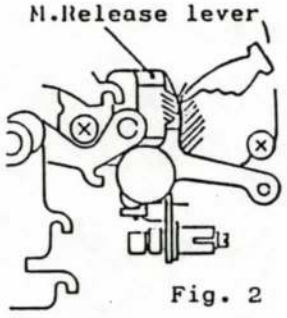


Fig. 2

1) Wind up the crank and stop it just before setting,and hold. (Fig. 1)

   Up till the position that the mirror release lever overlaps the base plate (Fig. 2)

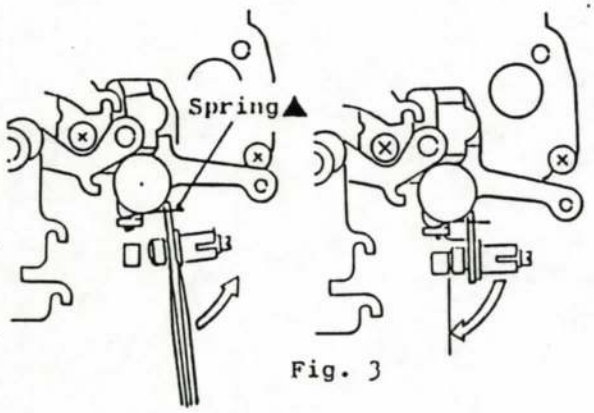


Fig. 3

2) With a pair of tweezers move the mirror release lever toward the arrow direction.
   Check and confirm that the lever returns to the specified position when it is released gently.

3) If it dose not return to the specified position, replace the spring with a new one, or check if the mirror release lever and the lever B move smoothly.

4) Readjust.▲

Repair Steps : B

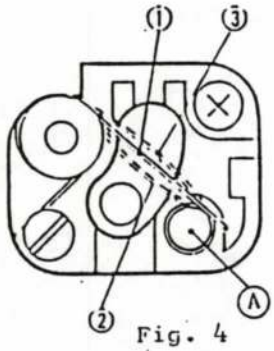


Fig. 4

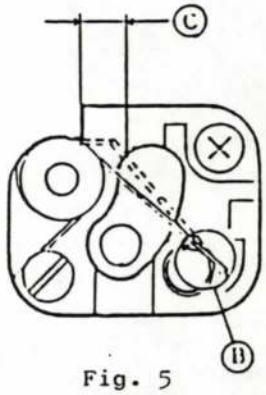


Fig. 5

1) Clean the trigger spring ① and the trigger pin Ⓐ with ether.(Fig. 4)

2) Check the trigger spring ① bended for adjusting, and if is the atate of ③ , readjust the spring by bending it within the range of Ⓒ.(Fig 5)

Contact pressure Ⓑ of the trigger pin Ⓐ to the trigger spring ① is to be adjusted to 30g.

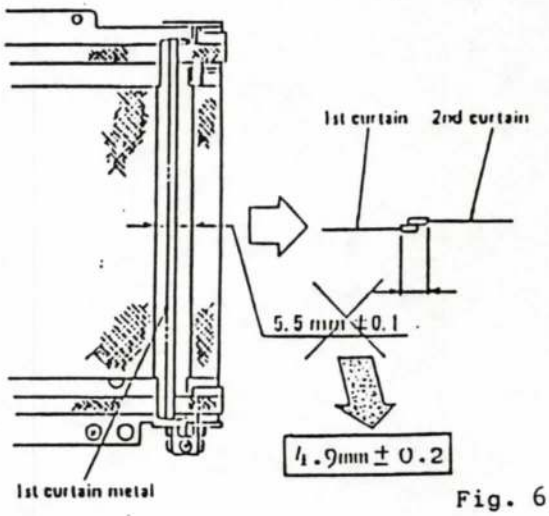


Fig. 6

3) In case that the bended direction of the trigger spring is ② ,the shutter curtain overlapping is to be adjusted 4.3mm ±0.2.

4) Than,adjust according to the step 2) above.

Remarks ▲Refer to Technical Bulletin REF.NO. 008

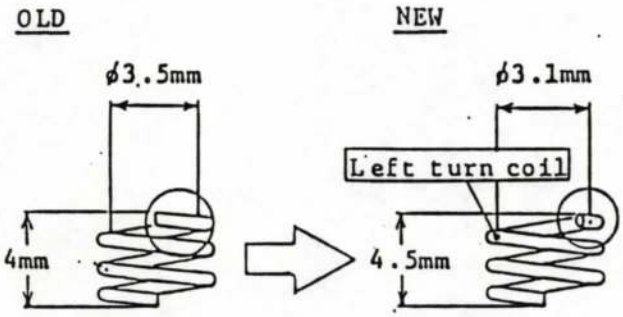
▲Parts NO.6200134 32 Refer Technical Bulletin REF.NO. 008

26 | NOV | 86

NEW SPRING OF 1st CURTAIN BOUNCE | 1/1 | 76 | 4

OUR REF.NO. 024

REVISED



1. PURPOSE

: To facilitate adjustment of 1st curtain bounce the spring has been changed as shown in the drawing.

2. ADJUSTMENT OF 1st CURTAIN BOUNS

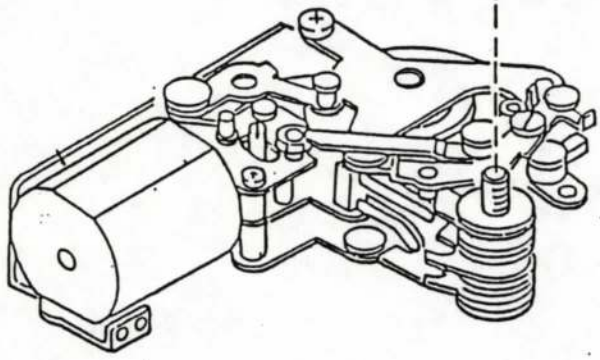
: Quite same step with repair manual page 36

ERRAT
~~620018422~~

3. MODIFICATION DATE

: From August,1986.

620018442



ERRATUM	AMEND TO READ
620018422 →	620018442

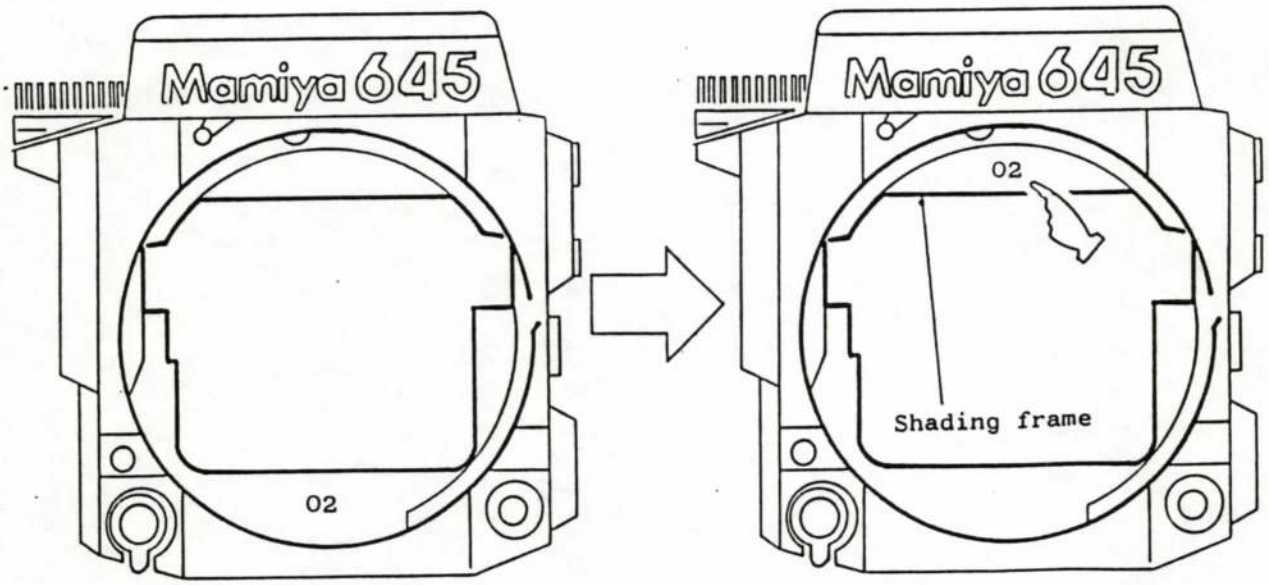
Remarks

	FLASH SYNCHRO AT 1/60	1/1	76	3

OUR.REF.NO. 023

1. DISCRIMINATION :Modified body is still marked with "02" stamp.
"02" stamped on the upper part of body front shown in to drawing below.

2. MODIFICATION DATE : From middle of October, 1986.



Remarks
▲ P.ID-02 : Parts Identification NO.

NEW SUBSIDIARY F.P.C.BOARD | 1/2 | 76 | 2

OUR REF.NO. 022

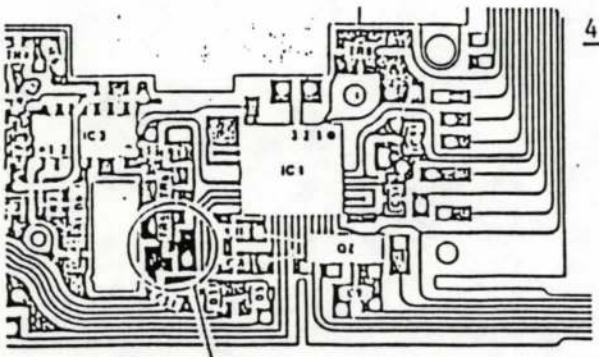
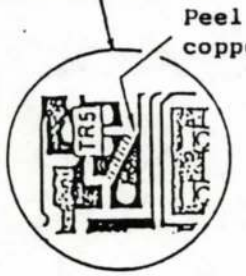


Fig.1



4. REPAIR STEP

1) Remove right side cover, bottom cover and bottom base plate referring to the repair manual page 21.

2) Carefully peel off the copper-coated pattern at the shaded portion of TR5 circuit, as shown in the left, by a cutter knife to disconnect the continuity. (Fig.1)

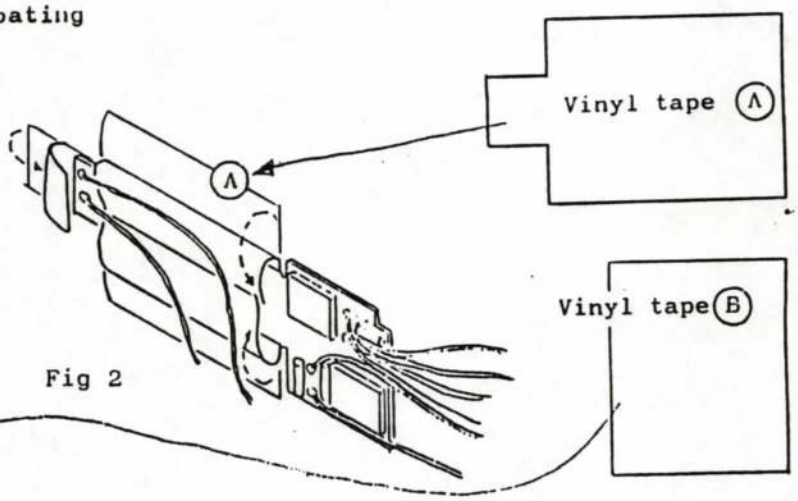


Fig 2

3) Put adequate length vinyl tape on the shaded portions of sub-F.P.C.board to isolate the board from camera body. (Fig.2)

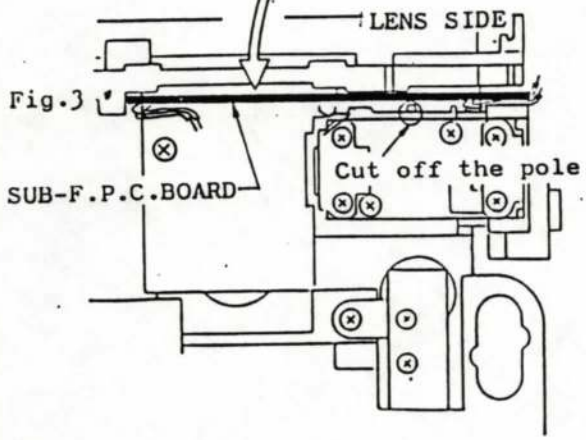


Fig.3

4) Cut off the pole and insert Sub F.P.C board between the lens mount and the battery case. (Fig.3)

5) Solder each leadwire to Main F.P.C. board by referring to the attached wiring diagram.

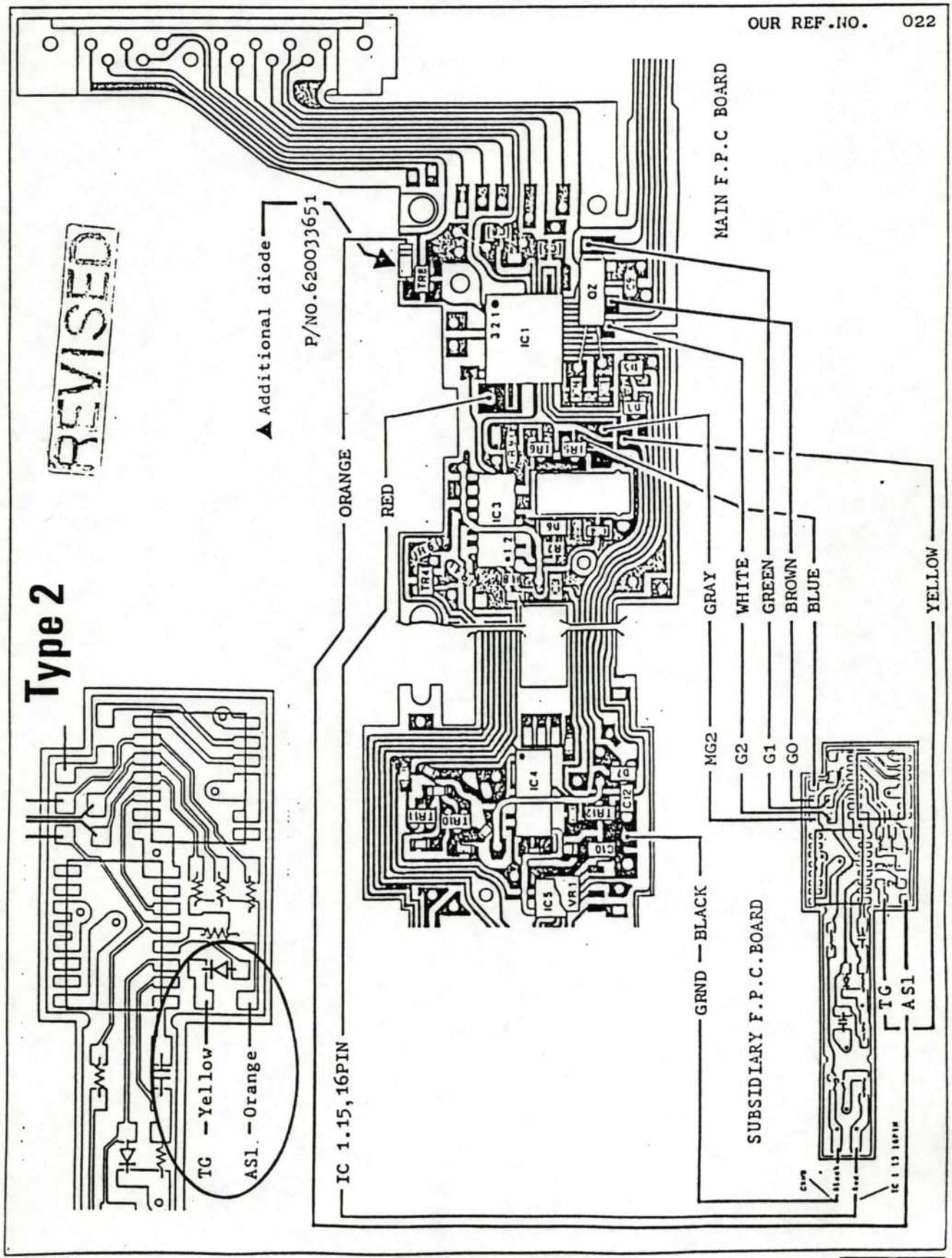
REVISED

Remarks

86 | 10

	NEW SUBIDIARY F.P.C.BOARD TYPE 2	1/2	76	2

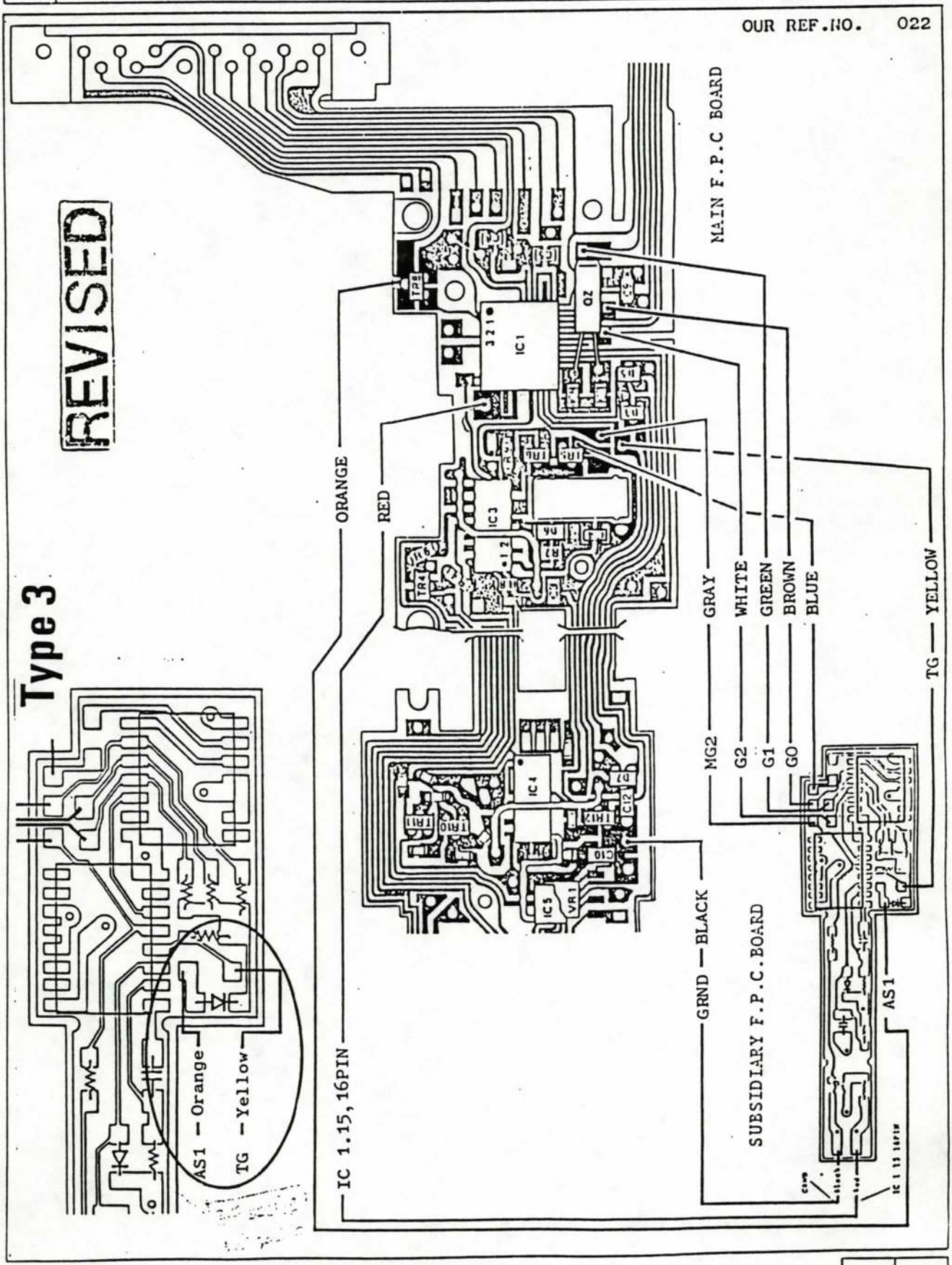
OUR REF.NO. 022



Remarks

	NEW SUBIDIARY F.P.C.BOARD TYPE 3	2/2	76	2

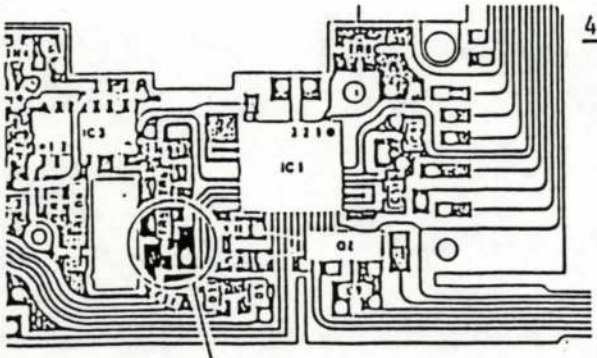
OUR REF.NO. 022



Remarks

NEW SUBSIDIARY F.P.C.BOARD | 2/3 | 76 | 2

OUR REF.NO. 022



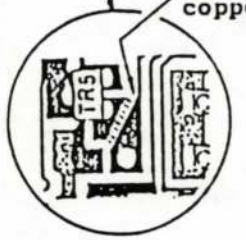


Fig.1

4. REPAIR STEP

1) Remove right side cover, bottom cover and bottom base plate referring to the repair manual page 21.

2) Carefully peel off the copper-coated pattern at the shaded portion of TR5 circuit, as shown in the left, by a cutter knife to disconnect the continuity. (Fig.1)

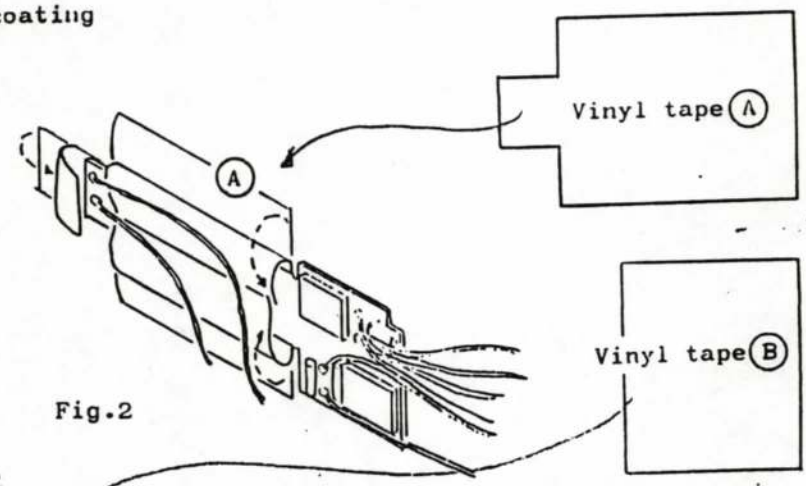


Fig.2

3) Put adequate length vinyl taPe on the shaded portions of sub-F.P.C.board to isolate the.board from camera body. (Fig.2)

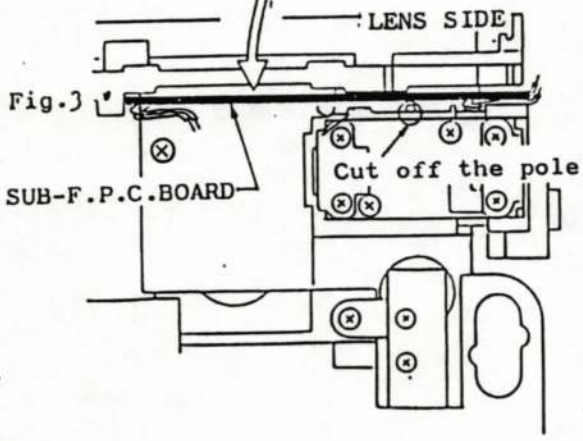


Fig.3

4) Cut off the pole and insert Sub F.P.C board between the lens mount and the battery case. (Fig.3)

5) Solder each leadwire to Main F.P.C. board by referring to the attached wiring diagram.

REVISED

Remarks

86 | 10

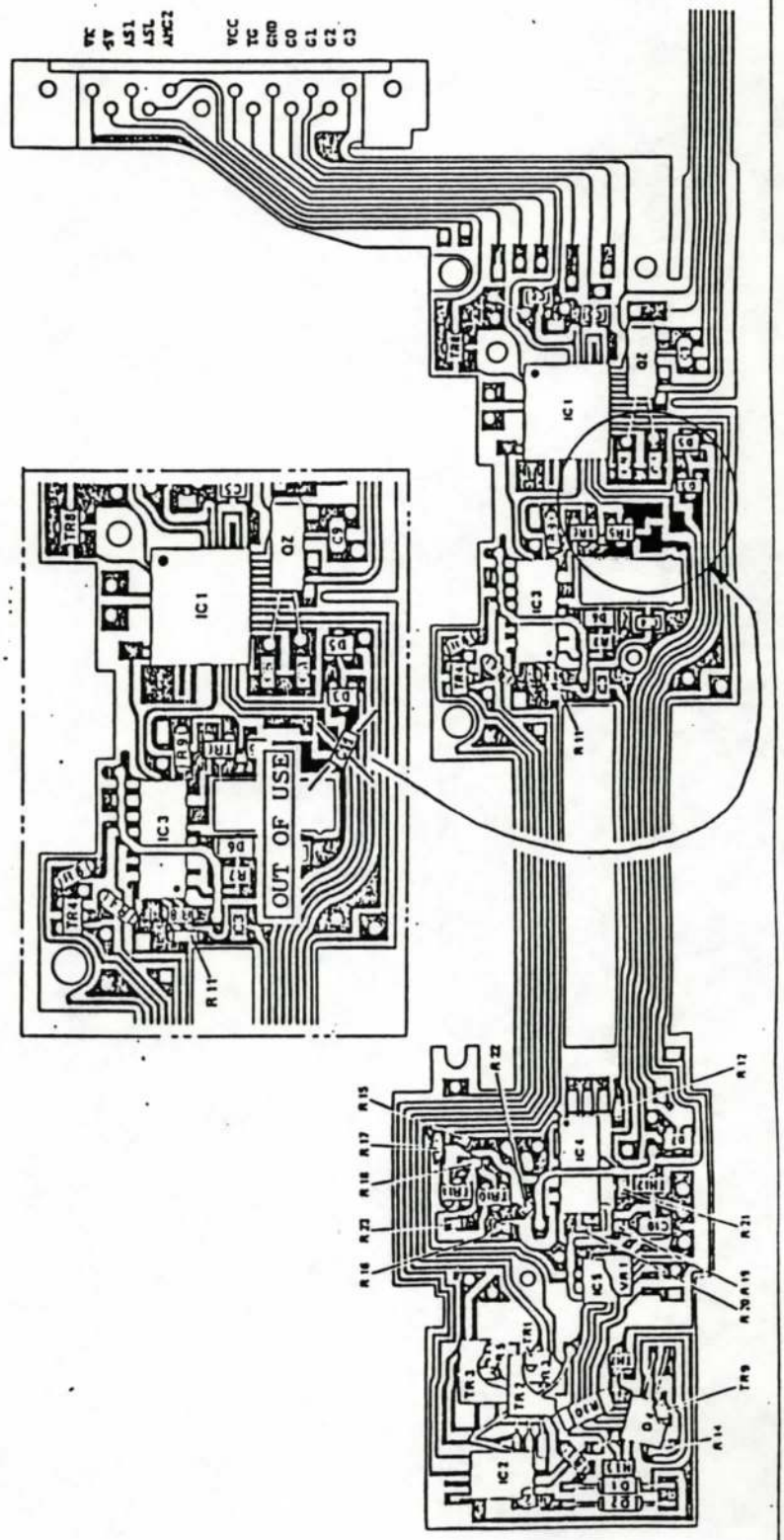
	NEW WIRING DIAGRAM	74	1/2	1

OUR REF.NO. 018

1. PHENOMENON : After completion of winding up with power drive, again move the selector lever of power drive to start position sometimes release shutter dose not work.

2. MODIFICATION : Take off C11(0.1μF 15v) condenser from Main F.P.C board.

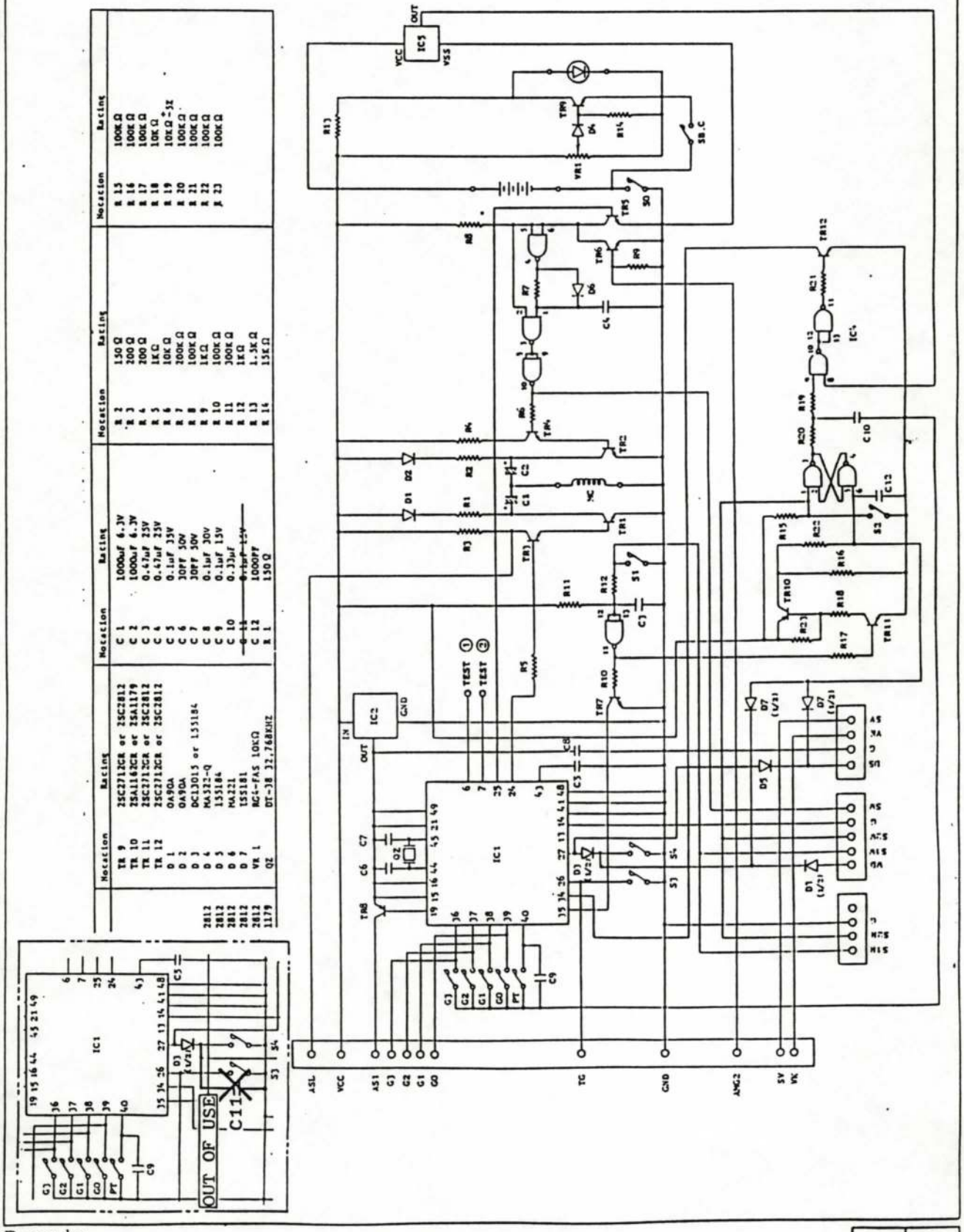
3. MODIFICATION DATE : From May, 1986.



Remarks

	NEW WIRING DIAGRAM	2/2	73	1

OUR REF.NO. 018



Notation	Rating
TR 9	2SC2713GR or 2SC2812
TR 10	2SA1163GR or 2SA1179
TR 11	2SC2713GR or 2SC2812
TR 12	2SC2713GR or 2SC2812
D 1	0A90A
D 2	0A90A
D 3	DC13013 or 155184
D 4	MA322-Q
D 5	155184
D 6	MA221
D 7	155181
VR 1	RG4-FAS 10KΩ
QZ	DT-38 32.768KHZ

Notation	Rating
C 1	1000uF 6.3V
C 2	1000uF 6.3V
C 3	0.47uF 25V
C 4	0.47uF 25V
C 5	0.1uF 35V
C 6	30PF 50V
C 7	30PF 50V
C 8	0.1uF 50V
C 9	0.1uF 15V
C 10	0.33uF
C 11	0.1uF 15V
C 12	1000PF
R 1	150Ω

Notation	Rating
R 2	150Ω
R 3	200Ω
R 4	200Ω
R 5	1KΩ
R 6	10KΩ
R 7	200KΩ
R 8	100KΩ
R 9	1KΩ
R 10	100KΩ
R 11	300KΩ
R 12	1KΩ
R 13	1.5KΩ
R 14	15KΩ

Notation	Rating
R 15	100KΩ
R 16	100KΩ
R 17	100KΩ
R 18	10KΩ
R 19	10KΩ+5%
R 20	100KΩ
R 21	100KΩ
R 22	100KΩ
R 23	100KΩ

Remarks

	NEW SHUTTER ASS'Y	1/1	76	6

OUR REF.NO. 013

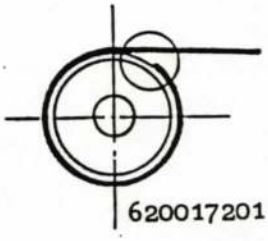
PHENOMENON : The curtain ribbon was teard off.

MODIFICATION : A longer curtain ribbon is used to increase the bonding area and adhesive strength.

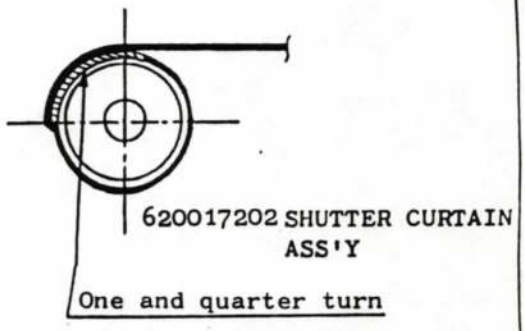
MODIFICATION DATE : From October,1986.

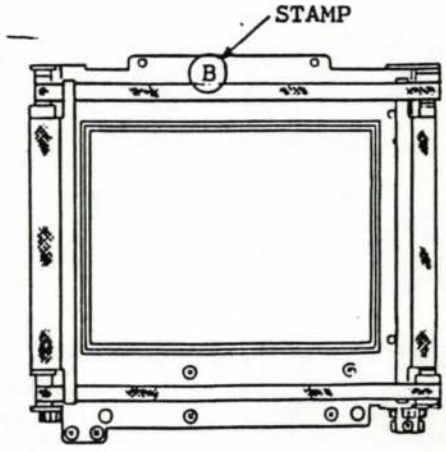
Modification mark of shutter curtain : "B" stamp on the shutter base plate.

OLD TYPE



NEW TYPE

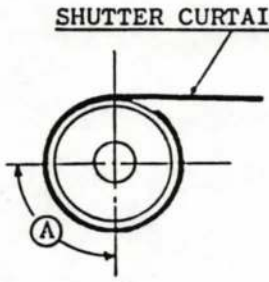




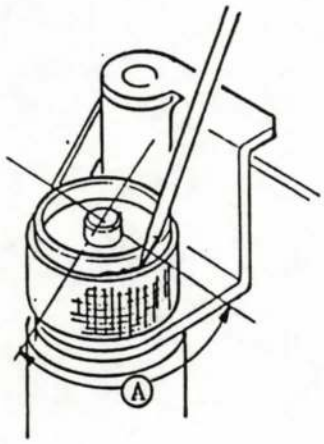
Remarks

REPAIR FOR SHUTTER CURTAIN RIBBON | 1/1 | 76 | 5

OUR REF.NO. 011



If the shutter assembly is removed for repair,take the following steps.



1. Steps

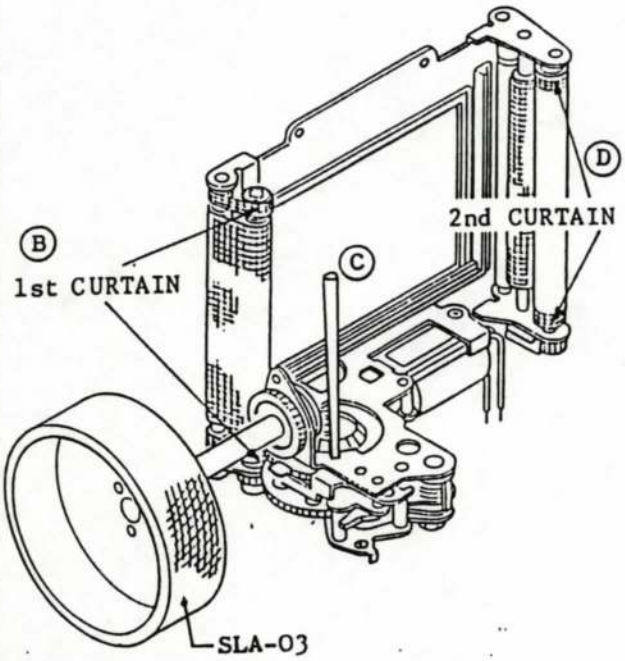
1) Apply a small amount of quick bond to two points of Section (A) to bond 1st curtain drum (B) to curtain ribbon.

2) Using the tool SLA-03,wind the shutter curtain.Insert a toothpick into slit (C) to stop the winding of the shutter curtain.

3) As in Step 1,apply a quick bond to part (D).

4) Leave the bonded parts(in the wound state) for 24 hours.

NOTE : Use a commercially avaiabe quick bond.



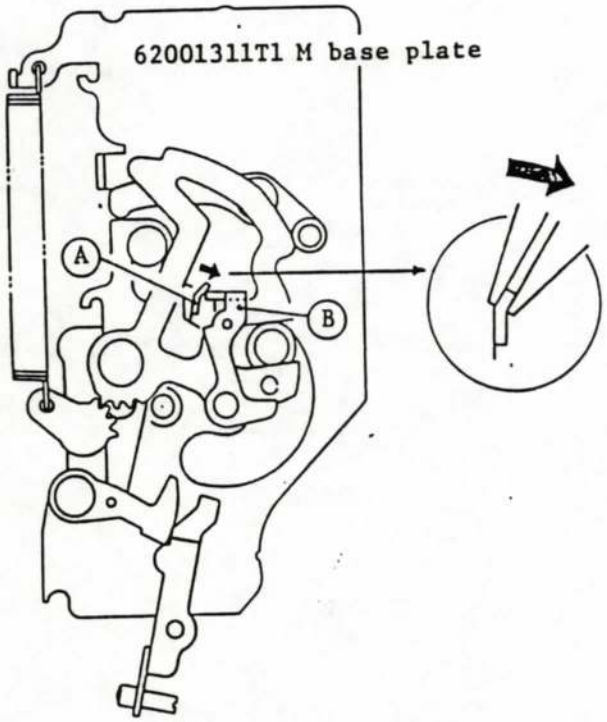
Remarks

MIRROR NOT RETURN

1/1

76 4

OUR REF.NO. 010



1. PHENOMENON

: MIRROR does not return even if 2nd curtain closes completely.

2. CAUSE

: (A) mirror release lever does not kick
(B) mirror-up lever properly

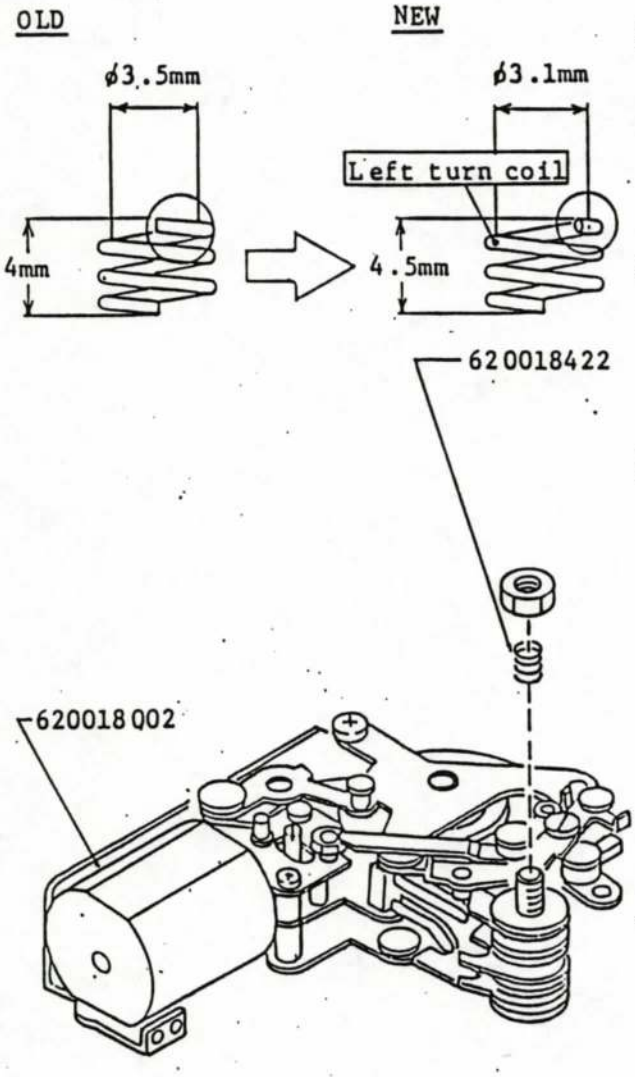
3. REPAIR STEP

: Carefully bend the tip of (A) lever.

Remarks

NEW SPRING OF 1st CURTAIN BOUNCE | 1/1 | 76 | 3

OUR REF.NO. 009



1. PURPOSE

: To facilitate adjustment of 1st curtain bounce the spring has been changed as shown in the drawing.

2. ADJUSTMENT OF 1st CURTAIN BOUNS

: Quite same step with repair manual page 36

3. MODIFICATION DATE

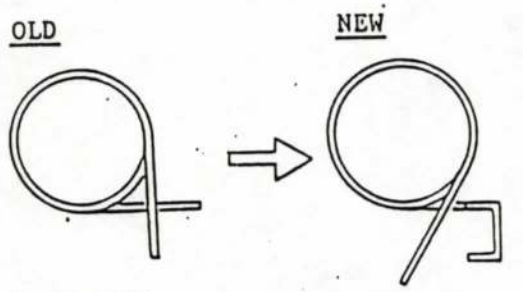
: From August,1986

Remarks

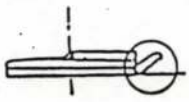
86 | 08

NEW SPRING FOR SHUTTER RELEASE LEVER

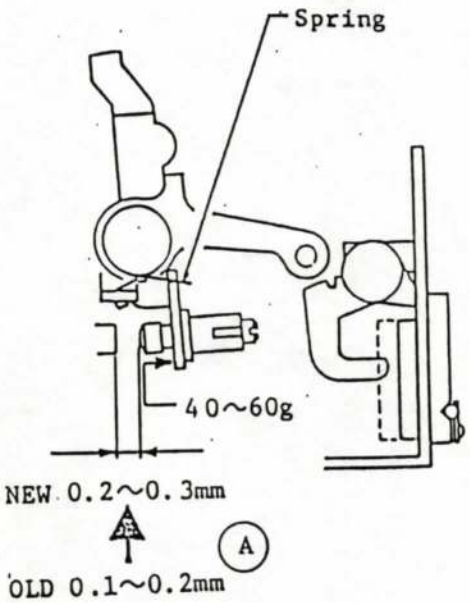
OUR REF NO. 008



620013431



620013432



1. PHENOMENON

: The mirror does not return and stays at risen position.

2. CAUSE

: 2nd curtain does not run because 620013431 spring of S-lever does not work adequately.

3. MODIFICATION

: Shape of spring 620013431→620013432

4. REPAIR STEP

: Replace the spring with new one.

Note) After replacement of the spring adjustment of shutter release lever is required by referring Repair manual page 40- Ⓐ.

please note that the toleranse of adjustment was changed as shown in the drawing.

5. MODIFICATION DATE

: From July,1986

Remarks

NEW SUBSIDIARY F.P.C.BOARD | 2/3 | 76 | 1

OUR REF.NO. 006

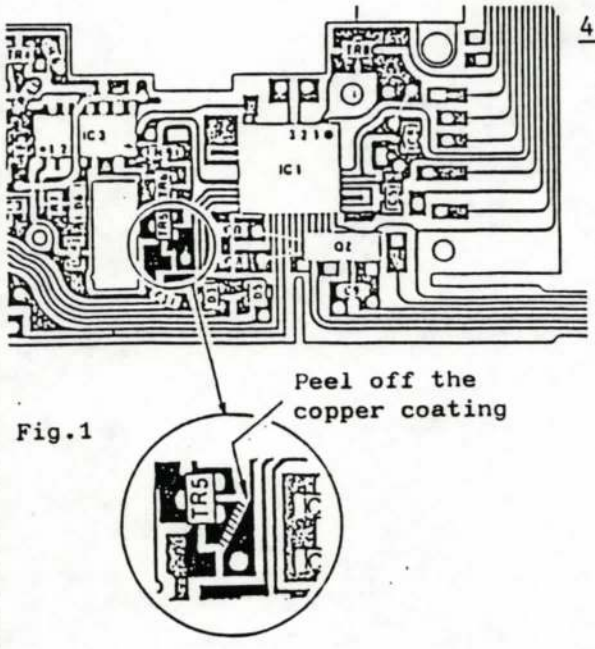


Fig.1

4. REPAIR STEP

1) Remove right side cover, bottom cover and bottom base plate referring to the repair manual page 21.

2) Carefully peel off the copper-coated pattern at the shaded portion of TR5 circuit, as shown in the left, by a cutter knife to disconnect the continuity. (Fig.1)

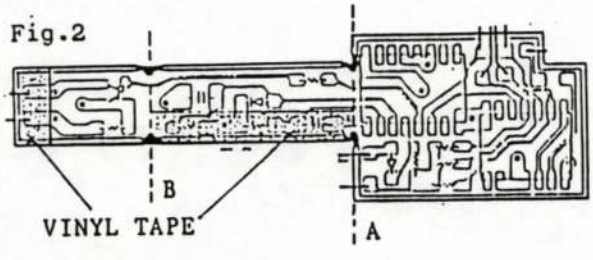


Fig.2

3) Put adequate length vinyl tales on the shaded portions of sub-F.P.C.board to isolate the board from camera body. (Fig.2)

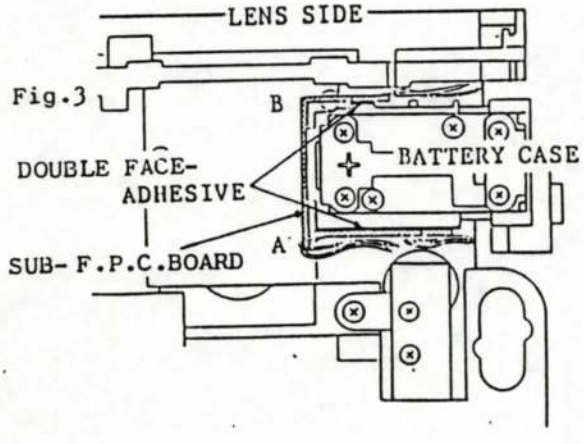


Fig.3

4) Put a double face-adhesive tape on outside wall of battery case. (Fig.3)

5) Fold F.P.C.board at line A and B to stay the board arround the battery case. (Fig.2&3)

6) Solder each leadwire to Main F.P.C.board by referring to the attached wiring diagram.

Remarks

	NEW SUBSIDIARY F.P.C.BOARD	1/3	76	1

OUR REF.NO. 006

1. PHENOMENON

: If the flash duration of an electronicflash is longer than 1/1000sec, vignetting may be caused on the exposed flash when shutter is released at 1/60 sec.

2. STEP

: Install 620033261 sub-F.P.C.board into the main F.P.C.board.

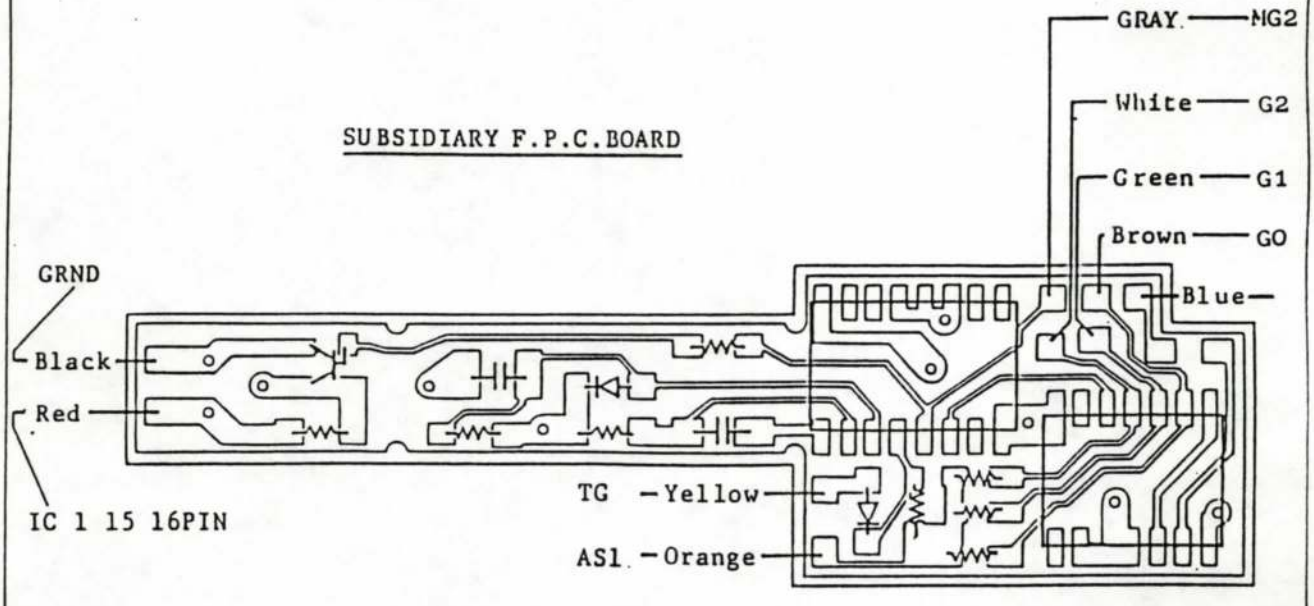
3. MODIFICATION DATE

: From October production 1986.

: P/NO.620033261 Sub-F.P.C.board will be supplied to you in October from our service department.

1.340.

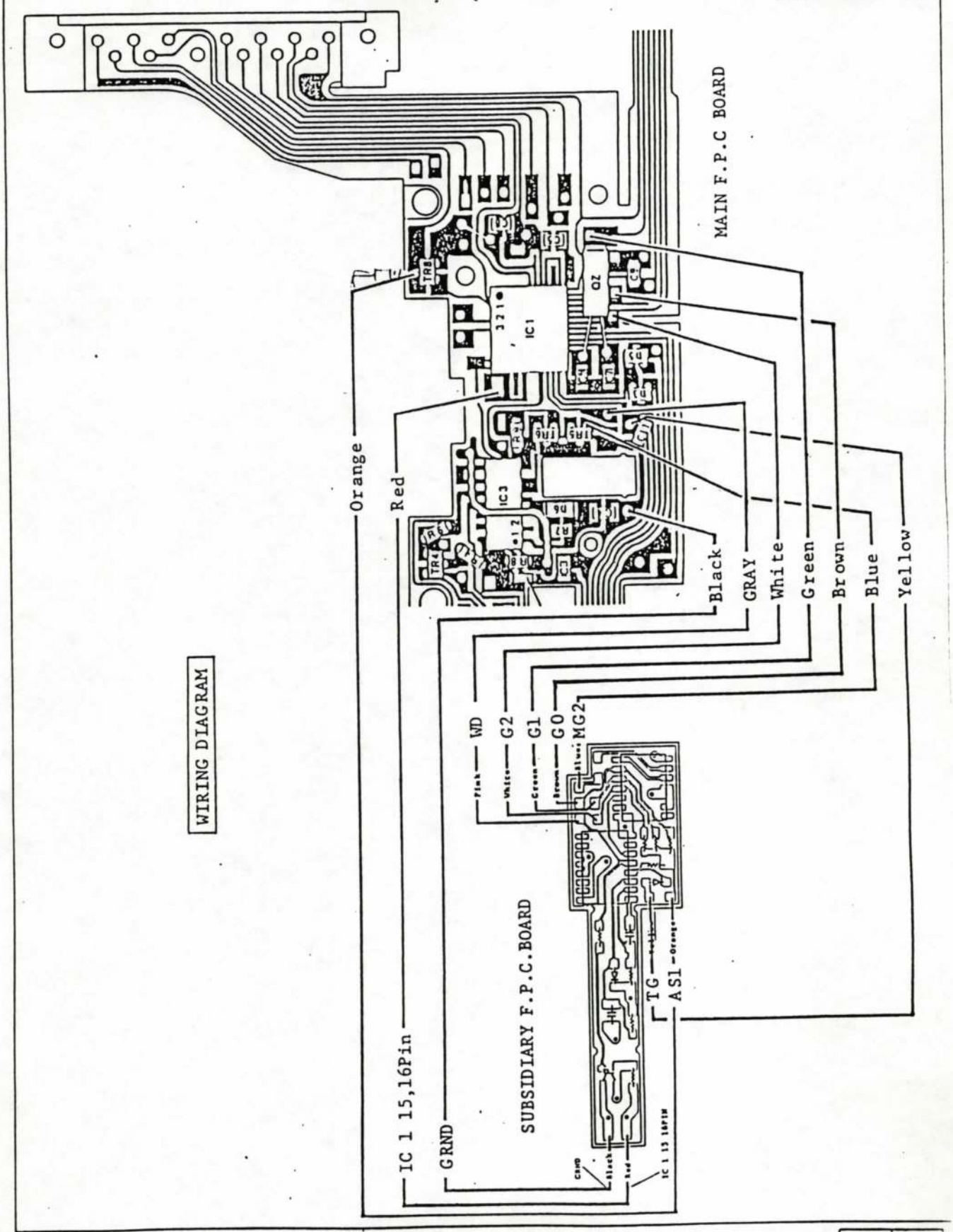
SUBSIDIARY F.P.C.BOARD



Remarks

NEW SUBSIDIARY F.P.C.BOARD	3/3	76	1

OUR REF.NO. 006

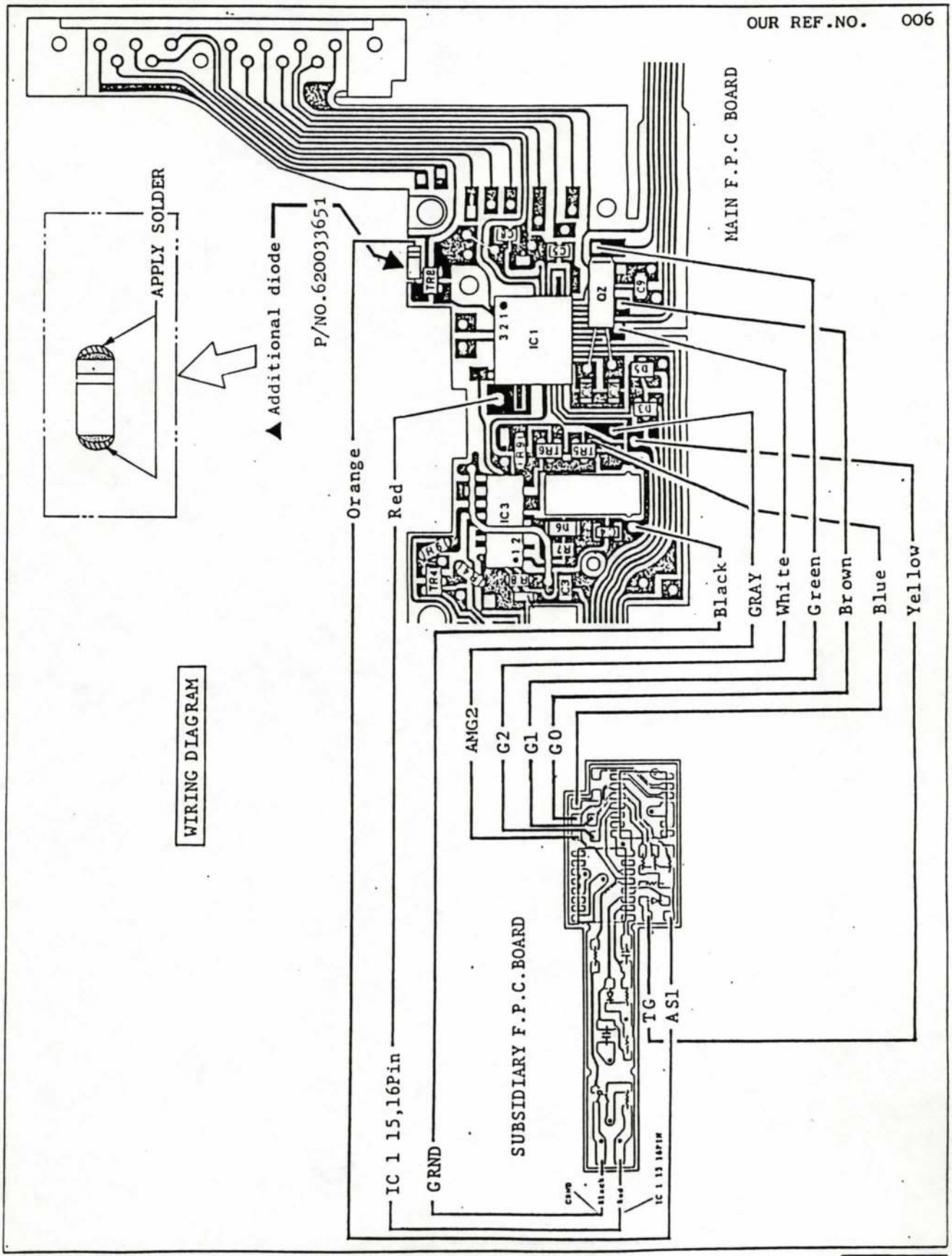


WIRING DIAGRAM

Remarks

	NEW SUBSIDIARY F.P.C.BOARD	3/3	76	1

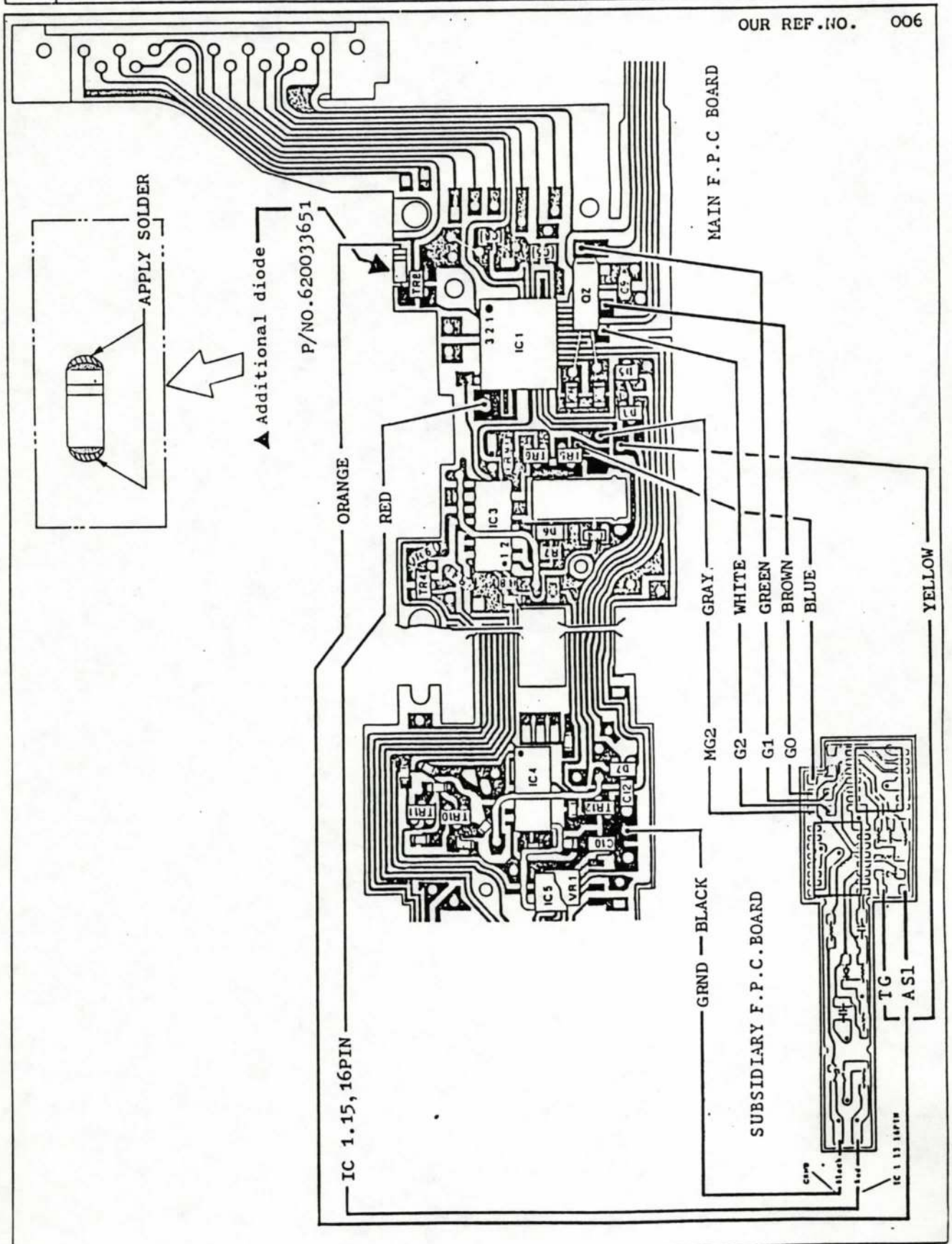
OUR REF.NO. 006



Remarks

	NEW SUBIDIARY F.P.C.BOARD	3/3	76	1

OUR REF.NO. 006



Remarks